UTILITY PATENT APPLICATION

TITLE OF INVENTION: **BROOM WITH SCUFF REMOVER**

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TITLE OF THE INVENTION

BROOM WITH SCUFF REMOVER

CROSS - REFERENCE TO RELATED APPLICATIONS

This patent application claims the benefit of U.S. Provisional Patent Application Serial No. 60/439,244 filed on January 10, 2003 and entitled "Broom with Scuff Remover," the disclosure of which is incorporated as if fully rewritten herein.

TECHNICAL FIELD OF THE INVENTION

The present invention relates generally to cleaning implements for industrial or home use, and more specifically to a conventional broom that includes an implement useful for removing scuff marks from floors.

STATEMENT REGARDING FEDERALLY FUNDED RESEARCH

This invention was not made by an agency of the United States Government nor under contract with an agency of the United States Government.

BACKGROUND OF THE INVENTION

Brooms and mops are commonplace cleaning devices that have been commercially available for many years. The usefulness and effectiveness of such cleaning implements is undisputed and many examples of variations on the basic design of the broom and the mop are found in the prior art. Numerous versions of mops that include both a mop head (fiber, sponge, or other material) and a separate scrubbing pad are also found in the patent prior art. While these devices may be useful for cleaning some surfaces, the scrubber pad is not typically effective or appropriate for use on surfaces such as hardwood or laminate floors.

Hardwood and laminate floors are often particularly susceptible to scuff marks left by shoes with rubber soles. These scuff marks are unsightly and are often quite difficult to remove, even when a mild cleaner or solvent is applied to the scuff mark. The average broom or mop is not effective for scuff removal purposes, so after any loose material has been swept away, the person cleaning the floor must find another means for removing any scuff marks that have been left on the surface being cleaned. Thus, removing scuff marks can prove to be a very inconvenient and often frustrating task. Therefore, there is a need for a single

integrated cleaning device that includes both a general cleaning head, such as a broom head, and a secondary cleaning surface useful for removing scuff marks.

SUMMARY OF THE INVENTION

These and other deficiencies of the prior art are overcome by the present invention which provides a multipurpose cleaning implement that functions both as a broom and a scuff removing device. The exemplary embodiment of the present invention includes a plastic base that serves as the attachment point for a number of other components. A plurality of bristles is attached to the bottom side of the base, preferably in a wedge-shaped configuration. An elongated handle is typically attached to the uppermost or top portion of the base. Thus, the cleaning implement of the present invention includes the basic features required for it to function as a standard broom. However, this invention also includes a second cleaning implement, namely a scuff removing device that is useful for removing scuff marks from floors.

A first general embodiment of the scuff removing device includes a friction forming material, such as, for example, a piece of tennis ball material, that has been attached to a base or support that includes a rounded or curved forward surface. This subassembly may be permanently attached to the front portion of the broom base, which in the exemplary embodiment is specifically formed to receive the scuff remover subassembly, or alternately, the scuff remover may be clipped or otherwise detachably connected to the front, back, or even side portions of the base of the broom. A second general embodiment of the scuff removing device includes a detachable scuff removing device that includes a piece of friction forming material, such as the outer material of a tennis ball, mounted on a base which may be clipped to the end of a broom handle opposite the broom head.

Further advantages of the present invention will become apparent to those of ordinary skill in the art upon reading and understanding the following detailed description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated into and form a part of the specification, schematically illustrate one or more exemplary embodiments of the invention and, together with the general description given above and detailed description of the preferred embodiments given below, serve to explain the principles of the invention.

FIG. 1 is a perspective view of one side of the combination broom and scuff remover of the present invention.

FIG. 2 is an exploded perspective view of one side of the combination broom and scuff remover of FIG. 1.

FIG. 3 is a rear-view of the combination broom and scuff remover of FIG. 1.

FIG. 4 is a front-view of the combination broom and scuff remover of FIG. 1.

FIG. 5 is a side-view of the combination broom and scuff remover of FIG. 1.

FIG. 6 is a top-view of the combination broom and scuff remover of FIG. 1.

FIG. 7a is a perspective view of the end of a broom handle.

FIG. 7b is a perspective view of a broom handle that includes an attachment for hanging the broom from a hook, nail, or similar device.

FIG. 7c is a perspective view of the embodiment of the present invention that includes a scuff removing device which is mountable on the end of the broom handle of FIG. 7a or 7b.

FIG. 8 is a perspective view of the scuff remover attachment of FIG. 7c

DETAILED DESCRIPTION OF THE INVENTION

The present invention provides a multi-purpose cleaning implement, the exemplary embodiment of which includes a conventional broom head and a second cleaning head or device for removing scuff marks from the surface being cleaned. With reference to the Figures, FIG. 1 is a perspective view of one side of the exemplary embodiment showing the various components of cleaning implement **10**. Cleaning implement **10** includes a base **12** which receives broom handle **40** and bristles **50** as well as scuff remover subassembly **30**.

As best shown in FIGS. 1, 2 and 5, base **12** further includes first support **14**, second support **16**, and center support **18** all of which are formed integrally with body **21** and provide structural support to base **12**. Collar **20** is formed integrally with center support **18** and, as shown in FIG. 6, may be threaded internally to correspond to threads (not shown) formed on broom handle **40**. Thus, in the exemplary embodiment, broom handle **40** is threaded into collar **20** and tightened to provide a means by which the end user of cleaning implement **10** may manipulate the device.

In addition to providing the attachment point for the broom handle, base **12** also provides the surfaces to which a plurality of bristles **50** are attached. As shown in FIGS. 1 and 2, top edge **52** of bristles **50** is attached to the first attachment surface **24** and second attachment surface **26**, both of which are formed on the underside of body **21**. In the exemplary embodiment, the attachment surfaces are angled slightly in relation to one another for the purpose of creating the wedge-shaped body of bristles shown in the Figures. The slightly upturned face of second attachment surface **26** allows the front edge of the bristle group or body to be angled outward, thereby increasing overall length of bottom edge **54**. Likewise, the slight angle of first attachment surface **24** allows the rear edge of the bristle group or body to be angled outward from the central axis of cleaning implement **10** to further increase the overall length of bottom edge **54**.

As will be appreciated by those skilled in the art, bristles **50** can be manufactured by and attached to base **12** by any number of known processes. Bristles **50** can be manufactured from a variety of materials including, for example, vinyl, plastic, and straw. Base **12** is typically molded plastic or polymer and may be manufactured using any of a variety of known manufacturing techniques.

Again with reference to FIGS. 1 and 2, the exemplary embodiment of base **12** further includes contoured neck **29** which is formed to receive scuff remover subassembly **30**. As best shown in FIG. 2, scuff remover subassembly **30** is attachable to or mountable on neck **29**. Neck **29** is formed to correspond to the shape of collar **33** and scuff remover subassembly **30** is mounted on base **12** by engaging these two structural members. Scuff remover subassembly **30** is correctly mounted on body **21** when it is pushed forward such that it contacts ridge **28**. Scuff remover subassembly **30** may be mounted on base **12** permanently, or it may be detachable. In alternate embodiments of the present invention, scuff remover subassembly **30** is mountable on the rear portion **22** (see FIG. 3) of body **21**. In some embodiments of the present invention, scuff remover subassembly **30** is a disposable item that may be replaced when it is no longer effective at removing scuff marks.

Scuff remover subassembly **30** includes base **32**, collar **33**, and cleaning surface **34**. As shown in FIGS 1-2 and 5-6, an exemplary embodiment of base **32** includes a forward-facing, curved surface area that serves as the substrate to which cleaning surface **34** is attached. Cleaning surface **34** is typically a separate piece of material that is glued or otherwise bonded to the curved surface of base **32**. Preferably, the material of cleaning surface **34** is polyester, acrylic, polymer, or elastomer impregnated with wool fibers, similar or even identical to the material used for tennis balls. However, other combinations of natural or synthetic fibers attached to a pliable, rubberized base are possible for use as cleaning surface **34**. In an exemplary embodiment of the present invention, a piece of tennis ball material is cut to size and glued to the curved surface area of base **32** as best shown in FIGS. 2 and 4. However, it should be noted that any material that forms friction sufficient to remove scuff marks from the floor or other surface to be cleaned is compatible with this invention.

Cleaning implement **10** offers the user two separate but integrated devices or tools for cleaning surfaces such as hardwood, laminate, tile, linoleum, or concrete floors. The user may remove loose dust and dirt by sweeping the surface in the typical manner. To remove scuff marks from the surface, the user simply rotates the handle of the cleaning implement **10** to turn base **12** such that cleaning surface **34** of scuff remover subassembly **30** is touching the surface to be cleaned. By applying force in a downward and back and forth or side-to-side manner, the scuff mark may be removed.

An alternate embodiment of the present invention is shown in FIGS. 7a-c and FIG. 8. This embodiment of the present invention includes an attachment **70** that has been formed to fit on the end of the broom handle opposite base **12**. Attachment **70** includes cleaning surface **72** for removing scuff marks, and bracket **74** and first and second arms **76** and **78** respectively for securing attachment **70** to the broom handle. This detachable embodiment is compatible with bare wood handles such as that shown in FIG. 7a, as well broom handles that include a hanger subassembly **60** such as that shown in FIG. 7b. An exemplary embodiment of hanger subassembly **60** includes collar **62**, swivel collar **64**, and an aperture **66** for receiving a nail, hook, or other device for hanging the broom. As shown in FIG. 8, attachment **70** simply clips onto handle **40** and fits securely on top of hanger subassembly **60** as shown in the drawing.

Attachment **70** is used by simply clipping the device to the broom handle and flipping the entire broom over such that cleaning surface **72** is touching the surface to be cleaned. By applying force in a downward and back and forth or side-to-side manner, the scuff mark may be removed.

While the above description contains many specificities, these should not be construed as limitations on the scope of the invention, but rather as exemplification of certain preferred embodiments. Numerous other variations of the present invention are possible, and is not intended herein to mention all of the possible equivalent forms or ramifications of this invention. Various changes may be made to the present invention without departing from the scope or spirit of the invention.